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Personal Need for Structure in Relation to Language Variables

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Abstract

The present study focuses on determination of relationship between personal need for structure PNS, desire for structure *F1* and response to lack of structure *F2*, and language variables, namely, reading comprehension in foreign language and language proficiency. The research focussed at personal need for structure in context of learning a foreign language. Specifically, whether comprehension of foreign texts is connected to desire for structure or it is connected to response to lack of structure. The results of the experiment showed negative correlation between personal need for structure and reading comprehension in foreign language and also between personal need for structure and language proficiency.

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1. Introduction

The issue of Personal Need for Structure have been examined in academic setting mostly in terms of relations between personal need for structure and stereotypes, bias, ambiguity, tolerance, intolerance on ambiguity, anxiety or rigidity (Neuberg & Newsom, 1993; Sarmány-Schuller, 1999; Kruglanski & Webster, 1996, 200; Stangor, 2000; Thomson at al., 2001 and others). However, personal need for structure has not yet been explored in context of linguistic variables, specifically, the relationship to the skill of reading comprehension. Stranovská et al. (2013) proved negative relationship between need for structure and verbal intelligence (Stranovská at al. 2013). Reading comprehension in foreign language is affected by language and cognitive processes. Ehlers (1998) claims there are not research studies explaining effect of linguistic and cognitive variables on reading comprehension in foreign

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language. The focus of the current study was to find out relationship between the skill of reading comprehension in foreign language and need for structure as an individual's categorisation activity.

2. Need for Structure and Reading Comprehension in Foreign Language

Cognitive individual variable *Personal Need for Structure* is characterised by representation of simplified information, generalising of previous experience (Markus & Zajonc, 1985; Allport, 1954), organising information into less complex categories used in new and ambiguous situations to preserve certainty (Neuberg & Newsom, 1993). The research of personal need for structure is mainly associated with the following variables: stereotypes and bias (Neuberg & Newsom, 1993; Sarmány-Schuller, 1999; Stangor, 2000). High need for structure is related to the need for rapid, simple and exact responses and for diverting from uncertain or ambiguous information (Kruglanski & Webster, 1996, 2000; Webster & Kruglanski, 1994). Such an individual feels uncomfortable and uncertain in uncertain situations (Thompson, et al., 2001; Neuber, et al., 1997; Neuberg & Newsom, 1993). Neuberg and Newsom (1993) identified two conceptual different factors of *need for structure*: 1. *Desire for structure*, F1, and 2. *Response to lack of structure*, F2. *Desire for structure*, F1 refers to the extent of desired structure of individuals in daily lives. *Response to lack of structure*, F2, refers to individuals' responses to unstructured, unpredictable situations. Individuals who expressively dislike uncertain situations or changes in their plans at the last moment achieve high scores in responses to lack of structure. Psycholinguistic model of Goodman (1967, 1971) and Smith (1971) has a determining influence on the research of the linguistic variable, *foreign-language reading comprehension* in cognitive psychology and linguistics. Goodman universal hypothesis *reading in mother tongue and in foreign language are identical processes* stimulate researchers to verify the following hypotheses: 1. *Interdependency hypothesis*: Reading comprehension in foreign language depends on cognitive skill of reading in mother tongue (Bernhard, 1991; Coady, 1979; Hudson, 1982). 2. *Linguistic threshold hypothesis*: Reading comprehension in foreign language depends on language competence in that language (Clarke, 1980; Cziko, 1978). Clarke (1980) found out that a reader with a high or a low linguistic competence uses the same graphic, syntactical and semantic indicators in foreign language text as they use in mother tongue. According to Cziko (1978) only advanced reader in mother tongue as well as in foreign language is able to recognise semantic and pragmatic indicators in text. Furthermore, beginners in learning of foreign language are focused on graphic aspects in reading whereas advanced students use reading strategies of mother tongue and extra textual indicators. Hudson (1982) built on Clarke's research studies (1979, 1980) and shares the same view of the positive influence of foreign language proficiency on reading, but on the other hand he distinguishes reader's performance in mother tongue. It is important for a reader not only to activate the received knowledge but also to use it and to connect it with new knowledge. Gadušová (2004) studies also emotional indicators, imagination, cultural specifications and motivation. The latter research studies are focused on exploration of predictors of reading, mainly on a working memory, language sensitivity, rapid naming, phonological awareness (Foy & Mann, 2006; Anthony & Francis, 2005; Smith-Spark & Fisk, 2007).

3. Research Methodology

3.1. Research sample

Research was carried out at Constantine the Philosopher University in Nitra in the academic years 2011/2012, 2012/2013 and 2013/2014. It was attended by 221 students enrolled in various faculties and programmes, studying foreign language as their minors, namely, English/German for Academic Purposes. They were full-time students in the second year. The average age of the students was 20,5 years. The average number of years of learning English was 9 years and German 8 years.

3.2. Hypotheses

The following hypothesis was assumed: H0 There is a negative relationship of need for structure and reading comprehension in foreign language. The correlation analysis served as a tool for testing the hypothesis.

3.3. Research methods and tests of language proficiency

PNS Scale (Thomson et al., 2001) – Personal Need for Structure is derived from the assumption that the ability to reduce the uncertainty of situation and cognitive burden or to manage simplified information is connected with managing unknown situations. The scale consists of 12 items. The Slovak version of the PNS Scale was used in the study (Sarmány-Schuller, 1999). The PNS construct is based on two-factors concept of personal need for structure: 1. Desire for structure (sub-factor *F1*) and 2. Response to lack of structure (sub-factor *F2*). Test of foreign language proficiency in both languages, English and German. The test consists of 74 items and measures individual ability in morphology, syntax, lexicology, cultural studies, and reading comprehension. The tests were designed according to ISED 3 level B1/B2.

3.4. Results

Table 1 displays statistically significant correlations among examined variables – *F1*, *F2*, *PNS*, *reading comprehension*, *language proficiency* and *years of study*. Relations of examined variables are investigated for English and German separately. For English language, the coefficients of correlation matrix show statistically significant positive relationship between foreign language proficiency and reading comprehension in foreign language ($r = 0.571$) and statistically significant negative relationship between desire for structure and years of learning English ($r = -0.190$). For German language, the coefficients of the correlation matrix displays statistically significant positive relationship between foreign language proficiency and reading comprehension in foreign language ($r = 0.779$) and statistically significant negative relationship between desire for structure and foreign language proficiency ($r = -0.208$).

Table 1. Correlate matrix of examined variables – English language

	Years_of_FL_study	Language_test_score	Reading_comprehension_test_score	F1	F2	PNS
Years_of_FL_study	1.000	-0.059	-0.028	-0.190	-0.075	-0.148
Language_test_score	-0.059	1.000	0.571	0.049	0.041	0.053
Reading_comprehension_test_score	-0.028	0.571	1.000	0.056	0.047	0.061
F1	-0.190	0.049	0.056	1.000	0.389	0.773
F2	-0.075	0.041	0.047	0.389	1.000	0.885
PNS	-0.148	0.053	0.061	0.773	0.885	1.000

Table 2. Correlate matrix of examined variables – German language

	Years_of_FL_study	Language_test_score	Reading_comprehension_test_score	F1	F2	PNS
Years_of_FL_study	1.000	0.002	0.064	-0.105	-0.071	-0.098
Language_test_score	0.002	1.000	0.779	-0.208	-0.049	-0.132
Reading_comprehension	0.064	0.779	1.000	-0.178	-0.066	-0.129

_test_score						
F1	-0.105	-0.208	-0.178	1.000	0.490	0.807
F2	-0.071	-0.049	-0.066	0.490	1.000	0.910
PNS	-0.098	-0.132	-0.129	0.807	0.910	1.000

The relationships among the examined variables according to field of study – faculty affiliations: ff- Faculty of Arts, fpv- Faculty of Natural Sciences were investigated.

Table 4. Correlate matrix of examined variables – Faculty of Natural Sciences

	Years_of_FL_study	Language_test_score	Reading_comprehension_test_score	F1	F2	PNS
Years_of_FL_study	1.000	-0.104	-0.009	-0.290	-0.140	-0.252
Language_test_score	-0.104	1.000	0.565	0.230	0.174	0.241
Reading_comprehension_test_score	-0.009	0.565	1.000	0.193	-0.025	0.089
F1	-0.290	0.230	0.193	1.000	0.368	0.793
F2	-0.140	0.174	-0.025	0.368	1.000	0.858
PNS	-0.252	0.241	0.089	0.793	0.858	1.000

Table 5. Correlate matrix of examined variables – Faculty of Arts

	Years_of_FL_study	Language_test_score	Reading_comprehension_test_score	F1	F2	PNS
Years_of_FL_study	1.000	0.059	0.058	0.064	0.107	0.101
Language_test_score	0.059	1.000	0.906	-0.452	0.051	-0.172
Reading_comprehension_test_score	0.058	0.906	1.000	-0.455	-0.055	-0.244
F1	0.064	-0.452	-0.455	1.000	0.579	0.841
F2	0.107	0.051	-0.055	0.579	1.000	0.928
PNS	0.101	-0.172	-0.244	0.841	0.928	1.000

In the category - *fpv- Faculty of Natural Sciences*, there was statistical significance showed between need for structure and reading comprehension in foreign language or the period of foreign language learning. However, statistically significant positive relationship between foreign language proficiency and reading comprehension in a foreign language ($r = 0.565$) was found out. In the category - *ff- Faculty of Arts*, statistically significant negative relationship between desire for structure and foreign language proficiency ($r = -0.452$), statistically significant negative relationship between desire for structure and reading comprehension in foreign language ($r = -0.452$) and statistically significant positive relationship between foreign language proficiency and reading comprehension in a foreign language ($r = 0.906$) were found out.

4. Discussion and Conclusion

The assumption of negative relationship between *need for structure* and *reading comprehension* in foreign language was confirmed in the case of sub-factor F1: *desire for structure*. There is a negative correlation between *reading comprehension* in foreign language and *desire for structure* of students of the faculty of arts, i.e. the lower

the desire for structure, the higher the skill of reading comprehension and vice versa. Apparently, desire for structure is the predictor for reading comprehension in foreign language by the students of the faculty of arts. The students use more complex information from the text, they avoid simplification. They have less cognitive burden by managing information from a foreign text. They seek semantic, pragmatic and extra textual indicators in text, specifically cultural specifications, connotations, etc. They do not focus on rules, structure or patterns of sentences or denotations. Desire for structure is associated with need for structured and organised information. Moreover, statistically significant negative correlation was proved only in the case of students of the faculty of arts. There were no significant correlations found out between *desire for structure* and *reading comprehension* by the students of the other faculties. However, there is no statistically significant difference among *faculties* in terms of the score of the variable *desire for structure*. Based on the study reading comprehension positively correlates with foreign language proficiency, i.e., the higher foreign language proficiency, the higher reading comprehension. The results confirmed the linguistic threshold hypothesis as Clarke (1980), Cziko (1978), Eskey (1973) stated. Foreign language students need to firstly receive certain degree of language competence in the studied language to be capable to comprehend the text in foreign language. Any further research would examine the need for structure in relation to language variables of the students studying foreign languages as their major programmes.

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